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## **Conduct of Operations Competencies and Learning Objectives**

Competency 1: Demonstrate knowledge of the principles of CONOPS and relate these principles to an operational environment. (Corresponds to Competency 6.1, General Technical Base Qualification Standard)

- a) Referring to a copy of DOE 5480.19, locate applicable guidelines and requirements for specific activities.
- b) For each of the eighteen chapters in Attachment 1 to the Order, explain how each chapter contributes to an effective and safe operational environment.
- c) Identify the key elements of assessments, surveillance, and audits, and their application.
- d) Describe the self assessment process.
- e) Referring to actual copies of facility Occurrence Reports, discuss how a lack of proper conduct of operations led to improper operational results.
- f) Referring to DOE O 430.1, Life Cycle Asset Management, O 232.1, Occurrence Reporting and Processing of Operations Information, and 5700.6C, Quality Assurance, explain how each contributes to a proper CONOPS environment.
- g) Describe the purpose of Safeguards and Security, and the role it plays with regards to CONOPS.
- h) Discuss proper critique principles and describe a proper critique process, including key elements.
- i) Define root cause and explain its importance to operational safety.
- j) Define and describe what lessons learned are and explain their importance to operational safety.
- k) Describe Stop Work Authority, and your role in its application.
- l) Describe the CPAF process and the role that it plays in the management of Department facilities.
- m) State the purpose of ORPS and the process.
- n) Describe the key elements that determine the safety significance of a condition.
- o) Describe the key elements of a lockout tagout system.

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Competency 2: Demonstrate working-level knowledge of DOE 5480.19, Conduct of Operations Requirements for DOE facilities, necessary to ensure implementation. (Corresponds to Competency 1.1, Technical Manager Qualification Standard)

- a) Discuss the purpose and describe the roles and responsibilities of the technical manager in implementing DOE Order 5480.19, Conduct of Operations Requirements for DOE facilities
- b) Discuss the considerations for establishing performance indicators.
- c) Identify possible performance indicators for a nuclear facility, and discuss their meaning to the management of safe facility operations.
- d) Discuss the methods for measuring and reporting performance to performance indicators.
- e) Discuss the considerations that must be evaluated to properly interpret performance to performance indicators, and to establish performance goals.
- f) Referring to DOE 5480.19 and its attachments. describe the methods of measuring performance.
- g) Discuss how the self-assessment process is applied to ensure safe operations.
- h) Discuss how contractor self-assessment is related to formal internal and external contractor assessments.
- i) Describe the types of operations where formal conduct of operations apply.
- j) Discuss the concept of “graded approach” and how it applies to the implementation of conduct of operations.
- k) Discuss 10CFR830 and its relationship to the Price-Anderson Act.
- l) Discuss the methods of performance data collection and trending, and the importance of trend analysis to operations surety.
- m) Explain the role of lessons learned to operations, and sources for identifying lessons learned and industry experience.

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Competency 3: Demonstrate familiarity-level knowledge of the guidance provided in DOE 5480.19, Conduct of Operations Requirements for DOE facilities, as related to the oversight of site/facility conduct of radiological work activities. (Corresponds to Competency 2.9, Radiation Protection Qualification Standard)

- a) Discuss the relationship between the guidelines provided in the DOE Radcon Manual and the guidance provided in DOE 5480.19.
- b) Explain the responsibilities of radiation protection personnel relative to implementation of the requirements of the Order for radiation protection and contamination control work activities.
- c) Become familiar with the fundamentals of radiological control, including terms such as exposure, contamination, and personal dosimetry.